



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,047	10/23/2003	Ulysses Gilchrist	390-011251-US(EQV)	7264
2512	7590	06/30/2005	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			MONBLEAU, DAVIENNE N	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/692,047

Applicant(s)

GILCHRIST ET AL.

Examiner

Davienne Monbleau

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/23/03; 4/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The IDS filed on 10/23/03 has been acknowledged and a signed copy of the PTO-1449 is attached herein.

The information disclosure statement filed 4/23/04 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-7 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the first end of the fork" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the receiver" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claims 6 and 7 are rejected as being dependent on an indefinite base claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Igarashi et al. (U.S. 2004/0099826).

Regarding Claim 1, *Igarashi* discloses in Figures 4 and 8 a device for the detection of substrates (1) stacked with a specific spacing at an opening (10) of a wall element (front wall) with a closure (4 and 6) for the opening (10), it being possible for this closure (4 and 6) to be adjusted in at least two different directions (vertically and horizontally) relative to the wall element (front wall) by means of a drive mechanism (31, 33, 35) that is positioned below the opening (10) and having a transmitting and receiving device (13) for transmitting and receiving a horizontally directed measuring beam, characterized in that the transmitting and receiving device (13) consists of a vertical drive mechanism (31) mounted on the wall element (front wall) and a sensor head (13) that can be adjusted between a lower and an upper position by means of the vertical drive mechanism (31, 33, 35), said sensor head being pivoted (via pivot shaft 44) on the vertical drive mechanism (10) so that it can pivot into the opening (10).

Art Unit: 2878

Regarding Claim 2, *Igarashi* discloses in Figure 4 that the vertical drive mechanism (31, 33, 35) is mounted below the opening (10) and outside of the region of movement of the closure (4 and 6) on the wall element.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 4, 8, and 9, to the extent taught and understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi.

Regarding Claim 3, *Igarashi* teaches in Figure 4 that the vertical drive mechanism (31, 33, 35) supports the sensor head (13) on a pivoting head (44) that has a horizontally directed pivot axis and is mounted on an arm (5). *Igarashi* does not teach that said arm (5) extends vertically. It would have been obvious, however, to one of ordinary skill in the art at the time of

Art Unit: 2878

the invention to have an arm that may be extended vertically to be able to access a larger number of vertically stacked substrates with keeping a compact system.

Regarding Claim 4, *Igarashi* teaches in Figure 4 that the pivot axis runs through a hollow shaft (paragraph [0040]) which can pivot between two terminal positions.

Regarding Claim 8, *Igarashi* teaches a wafer mapping system, which inherently must include an analysis unit in order to “map” the wafers, but does not teach specifically that the transmitting and receiving device (13) is equipped with its own electronic control and analysis unit, which is connected to a bus system of a central logic control. It would have been obvious, however, to one of ordinary skill in the art at the time of the invention to use particular electrical control means in *Igarashi* to provide certain characteristics and accommodate other electrical connections and systems.

Regarding Claim 9, *Igarashi* teaches in Figures 3A and 3B that the vertical drive mechanism (31, 33, 35) is constructed as a motor-spindle combination, which has an encoder (7) for identifying the vertical positions, the encoder being linked to the electronic control and analysis unit of the transmitting and receiving device (13), the measured signals obtained from the receiver (9b) thereby being assigned to the positions determined. (See also *Igarashi* paragraphs [0045] and [0054] to [0059]).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi in view of Wang et al. (U.S. 6,452,201).

Regarding Claim 10, *Igarashi* teaches a sensor head (13) with a transmitter (9a) and receiver (9b) but does not teach a reflection measuring device. *Wang* teaches in Figure 5 a

Art Unit: 2878

sensor head that is designed as a reflection measuring device, in which the transmitter and receiver (within each sensor 86) are arranged next to each other on the sensor head. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a reflection measuring device in *Igarashi*, as taught by *Wang*, to have more than one measuring path to improve the accuracy of detection. (See *Wang* Figure 5 which illustrates at least 2 measuring paths).

Allowable Subject Matter

Claims 5-7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the cited prior art of record does not teach or fairly suggest a device for the detection of substrates comprising, along with the other claimed features, a sensor head designed as a forked light barrier, in which, at one end of the fork, a transmitter is mounted for emitting a measuring beam directed along a measuring beam path towards the other end of the fork and, at the other end of the fork, there is provided a beam deflection device, from which a coupled optical fiber leads outside of the measuring beam pathway by means of optics to a receiver at the first end of the fork (25) in a lighttight manner.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because they teach various wafer/substrate mapping techniques with transmitter/receiver arrangements.

Art Unit: 2878

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 571-272-1945.


The examiner can normally be reached on Mon-Fri 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Davienne Monbleau

DNM


DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800